

## **Charged Particle Beam Apparatus and Automatic Astigmatism Adjustment Method**

### **ABSTRACT OF THE DISCLOSURE**

According to the invention, techniques for automatically adjusting for  
5 astigmatism in a charged particle beam apparatus. Embodiments according to the present  
invention can provide a charged particle beam apparatus and an automatic astigmatism  
adjustment methods capable of automatically correcting astigmatism and a focal point in  
a relatively short period of time by finding a plurality of astigmatism correction quantities  
and a focal point correction quantity in a single operation from a relatively small number  
10 of 2 dimensional images. Specific embodiments can perform such automatic focusing  
while minimizing damages inflicted on subject samples. Embodiments include, among  
others, a charged particle optical system for carrying out an inspection, a measurement  
and a fabrication with a relatively high degree of accuracy by using a charged particle  
beam.

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